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a cooking appliance including a cooking well for retaining a cooking medium and food to be cooked therein, at least one heating element for selectively heating the cooking medium, and a

temperature sensing device for sensing the temperature of a portion of the cooking medium at a certain position in said cooking well;

5 a computerized controller for directing the operation of said cooking appliance and for receiving, storing, and retrieving data, said controller including means for compensating for oil stratification.

10 3. An improved cooking appliance, comprising:

~~a cooking appliance including~~ a cooking well for retaining a cooking medium and food to be cooked therein, at least one heating element for  
15 selectively heating the cooking medium, and a temperature sensing device for sensing the temperature of a portion of the cooking medium at a certain position in said cooking well; and

20 a computerized controller for directing the operation of said cooking appliance and for receiving, storing, and retrieving data, said controller including means for compensating for a variation in operation of said cooking appliance,  
25 said means for compensating comprising detecting a drop in temperature of the cooking medium and initiating a cook cycle based upon said detection.

4. An improved cooking appliance, comprising:

7 a cooking appliance including a cooking well  
 for retaining a cooking medium and food to be  
 5 cooked therein, at least one heating element for  
 selectively heating the cooking medium, and a  
 temperature sensing device for sensing the  
 temperature of a portion of the cooking medium at  
 a certain position in said cooking well; and

10 a computerized controller for directing the  
 operation of said cooking appliance and for  
 receiving, storing, and retrieving data, said  
 controller including means for adjusting the  
 duration of a cook cycle according to a non-linear  
 15 compensation according to the formula

A raised to the power  $((B \times \Delta_{\text{TEMPERATURE}})/C)$

where A = *a product multiplier* ~~1.41421, for example~~  
 20 where B = *a derived temperature multiplier* ~~2, for example~~  
 where C = exponential growth and,  
 $\Delta_{\text{TEMPERATURE}}$  = Product Reference Temperature - Sensed Cooking  
 Medium Temperature.

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5. A method for cooking a food item comprising the steps of:  
 loading a food item into a cooking medium  
 in the cooking well of a cooking appliance;

heating the cooking medium to a reference temperature;

adjusting the cook time according to a non-linear, exponential compensation, said compensation comprising the formula

A raised to the power  $((B \times \Delta_{\text{TEMPERATURE}})/C)$

where A = ~~1.41421~~ *a product multiplier* for example

where B = ~~2~~ *a desired comp multiplier* for example

where C = exponential growth and,

$\Delta_{\text{TEMPERATURE}}$  = Product Reference Temperature - Sensed Cooking Medium Temperature.

6. A food item cooked according to a process comprising the steps of:

loading a food item into a cooking medium in the cooking well of a cooking appliance;

heating the cooking medium to a reference temperature;

adjusting the cook time according to a non-linear, exponential compensation, said compensation comprising the formula

A raised to the power  $((B \times \Delta_{\text{TEMPERATURE}})/C)$

where A = ~~1.41421~~ *a product multiplier* for example

where B = ~~2~~ *a desired comp multiplier* for example

where  $C$  = exponential growth and,

$\Delta_{\text{TEMPERATURE}} = \text{Product Reference Temperature} - \text{Sensed Cooking Medium Temperature.}$

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7. An improved cooking appliance, comprising:

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~~a cooking appliance including~~ a cooking well  
for retaining a cooking medium and food to be  
cooked therein, at least one heating element for  
selectively heating the cooking medium, and a  
temperature sensing device for sensing the  
temperature of a portion of the cooking medium at  
a certain position in said cooking well; and

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a computerized controller for directing the  
operation of said cooking appliance and for  
receiving, storing, and retrieving data, said  
controller including means for conducting cooking  
appliance performance checks through  
manipulation and display of information that has  
been received and stored by said controller.

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